

General

Title

Inflammatory bowel disease (IBD): percentage of patients aged 18 years and older with an IBD encounter who were prescribed prednisone equivalents greater than or equal to 10 mg/day for 60 or greater consecutive days or a single prescription equating to 600 mg prednisone or greater for all fills and were documented for risk of bone loss once during the reporting year or the previous calendar year.

Source(s)

American Gastroenterological Association (AGA). Inflammatory bowel disease (IBD): preventive care: corticosteroid related iatrogenic injury - bone loss assessment. Bethesda (MD): American Gastroenterological Association (AGA); 2015 Dec 18. 7 p.

Measure Domain

Primary Measure Domain

Clinical Quality Measures: Process

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the percentage of patients aged 18 years and older with an inflammatory bowel disease (IBD) encounter who were prescribed prednisone equivalents greater than or equal to 10 mg/day for 60 or greater consecutive days or a single prescription equating to 600 mg prednisone or greater for all fills and were documented for risk of bone loss once during the reporting year or the previous calendar year.

Rationale

Patients with inflammatory bowel disease (IBD) often rely on their gastroenterologist for healthcare maintenance. In addition, the gastroenterologist also provides guidance to the patient's primary care physician on a broad range of issues such as vaccinations, osteoporosis screening, and cancer/dysplasia

surveillance. Screening for osteoporosis is based on a combination of individual risk factors, but a history of prolonged (greater than 3 months) steroid use over 10 mg is reason enough to obtain dual-energy x-ray absorptiometry scanning (Moscandrew, Mahadevan, & Kane, 2009).

Markers of greater osteoporosis and fracture risk include older age, hypogonadism, corticosteroid therapy, and established cirrhosis (American Gastroenterological Association [AGA], "Osteoporosis in hepatic disorders," 2003).

The decision to measure bone density should follow an individualized approach. It should be considered when it will help the patient decide whether to institute treatment to prevent osteoporotic fracture. It should also be considered in patients receiving glucocorticoid therapy for two months or more and patients with other conditions that place them at high risk for osteoporotic fracture ("Osteoporosis prevention," 2000).

The most commonly used measurement to diagnose osteoporosis and predict fracture risk is based on assessment of bone mineral density (BMD) by dual energy X-ray absorptiometry (DXA) ("Osteoporosis prevention," 2000).

Measurements of BMD made at the hip predict hip fracture better than measurements made at other sites while BMD measurement at the spine predicts spine fracture better than measures at other sites ("Osteoporosis prevention," 2000).

Clinical Recommendation Statements:

IBD has only a modest effect on BMD, with a pooled Z score of -0.5 (AGA, "Guidelines on osteoporosis," 2003).

Corticosteroid use is the variable most strongly associated with osteoporosis. However, it is difficult to distinguish corticosteroid use from disease activity in terms of causal impact on bone density, because the two are closely linked (AGA, "Guidelines on osteoporosis," 2003).

However there is strong evidence that those on long-term steroids of greater than three months have a significant increase risk of fracture (Papaioannou, Ferko, & Adachi, 2001). DXA screening is recommended in inflammatory bowel disease patients with one or more risk factors: history of vertebral fractures, postmenopausal, male greater than 50 years of age, chronic corticosteroid therapy, or hypogonadism. If the initial DXA is normal, the AGA recommends repeat testing in 2 to 3 years. If the patient has osteoporosis, or has a history of a low trauma fracture, evaluation for secondary causes should be completed. Suggested studies include a complete blood count, serum concentrations of alkaline phosphatase level, calcium, creatinine, and 25-OH vitamin D, serum protein electrophoresis, serum calcium, and a testosterone level in males (Bernstein, Leslie, & Leboff, 2003).

Data on the treatment of osteoporosis in Crohn's disease depend on studies that are not specific to IBD. The evidence levels and recommendation grades are accordingly marked down. Weight bearing, isotonic exercise, stopping smoking, avoiding alcohol excess, and maintaining adequate dietary calcium (greater than 1 g/day) are beneficial. Hormone replacement treatment is no longer generally advised in postmenopausal women with osteoporosis, but regular use of bisphosphonates, calcitonin and its derivatives, and raloxifene may reduce or prevent further bone loss. Data in men with osteoporosis are less secure but bisphosphonates are probably of value. Newer data also support the use of strontium salts. Patients receiving systemic steroid therapy should receive calcium and vitamin D for prophylaxis (Van Assche et al., 2013).

Diagnosis of osteoporosis in adults is best made from a T score of less than -2.5 on radiographic bone densitometry, all other diagnosis methods having current limitations. The presence of osteoporosis identifies patients at above average risk for fracture and who should receive treatment. Osteopenia may be a prognostic marker for future osteoporosis, but presents little direct risk. However if the T score is less than -1.5, treatment with calcium and vitamin D should be recommended. Pre-existing history of fracture is of substantial adverse prognostic significance and patients should be treated for osteoporosis even if the T score is normal (Van Assche et al., 2013).

Evidence for Rationale

American Gastroenterological Association (AGA). American Gastroenterological Association medical position statement: guidelines on osteoporosis in gastrointestinal diseases. *Gastroenterology*. 2003 Mar;124(3):791-4. [15 references] [PubMed](#)

American Gastroenterological Association (AGA). American Gastroenterological Association medical position statement: osteoporosis in hepatic disorders. *Gastroenterology*. 2003 Sep;125(3):937-40. [1 reference] [PubMed](#)

American Gastroenterological Association (AGA). Inflammatory bowel disease (IBD): preventive care: corticosteroid related iatrogenic injury - bone loss assessment. Bethesda (MD): American Gastroenterological Association (AGA); 2015 Dec 18. 7 p.

Bernstein CN, Leslie WD, Leboff MS. AGA technical review on osteoporosis in gastrointestinal diseases. *Gastroenterology*. 2003 Mar;124(3):795-841. [298 references] [PubMed](#)

Moscandrew M, Mahadevan U, Kane S. General health maintenance in IBD. *Inflamm Bowel Dis*. 2009 Sep;15(9):1399-409. [PubMed](#)

Osteoporosis prevention, diagnosis, and therapy. NIH Consensus Statement Online. 2000 Mar 27-29;17(1):1-45. [111 references] [PubMed](#)

Papaioannou A, Ferko NC, Adachi JD. All patients with inflammatory bowel disease should have bone density assessment: pro. *Inflamm Bowel Dis*. 2001 May;7(2):158-62; discussion 168-9. [PubMed](#)

Van Assche G, Dignass A, Bokemeyer B, Danese S, Gionchetti P, Moser G, Beaugerie L, GomollÃ³n F, HÃ¼user W, Herrlinger K, Oldenburg B, Panes J, Portela F, Rogler G, Stein J, Tilg H, Travis S, Lindsay JO, European Crohn's and Colitis Organisation. Second European evidence-based consensus on the diagnosis and management of ulcerative colitis part 3: special situations. *J Crohns Colitis*. 2013 Feb;7(1):1-33. [PubMed](#)

Primary Health Components

Inflammatory bowel disease (IBD); corticosteroid-related iatrogenic injury; bone loss assessment; prednisone

Denominator Description

All patients aged 18 years and older with a diagnosis of inflammatory bowel disease (IBD) (see the related "Denominator Inclusions/Exclusions" field)

Numerator Description

Patients who have received dose of corticosteroids greater than or equal to 10 mg/day of prednisone equivalents for 60 or greater consecutive days or a single prescription equating to 600 mg prednisone or greater for all fills and who were documented for risk of bone loss during the reporting year or the previous calendar year (see the related "Numerator Inclusions/Exclusions" field)

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A clinical practice guideline or other peer-reviewed synthesis of the clinical research evidence

A formal consensus procedure, involving experts in relevant clinical, methodological, public health and organizational sciences

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Additional Information Supporting Need for the Measure

Unspecified

Extent of Measure Testing

Unspecified

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Ambulatory/Office-based Care

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Individual Clinicians or Public Health Professionals

Statement of Acceptable Minimum Sample Size

Specified

Target Population Age

Age greater than or equal to 18 years

Target Population Gender

Either male or female

National Strategy for Quality Improvement in Health Care

National Quality Strategy Aim

Better Care

National Quality Strategy Priority

Prevention and Treatment of Leading Causes of Mortality

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Living with Illness

IOM Domain

Effectiveness

Data Collection for the Measure

Case Finding Period

The reporting period (January 1 through December 31)

Denominator Sampling Frame

Patients associated with provider

Denominator (Index) Event or Characteristic

Clinical Condition

Encounter

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions

All patients aged 18 years and older with a diagnosis of inflammatory bowel disease (IBD)

Denominator Criteria (Eligible Cases):

Patients aged greater than or equal to 18 years on date of encounter

AND

Diagnosis for IBD (International Classification of Diseases, Tenth Revision, Clinical Modification [ICD-10-CM] codes): K50.00, K50.011, K50.012, K50.013, K50.014, K50.018, K50.019, K50.10, K50.111, K50.112, K50.113, K50.114, K50.118, K50.119, K50.80, K50.811, K50.812, K50.813, K50.814, K50.818, K50.819, K50.90, K50.911, K50.912, K50.913, K50.914, K50.918, K50.919, K51.00, K51.011, K51.012, K51.013, K51.014, K51.018, K51.019, K51.20, K51.211, K51.212, K51.213, K51.214, K51.218, K51.219, K51.30, K51.311, K51.312, K51.313, K51.314, K51.318, K51.319, K51.40, K51.411, K51.412, K51.413, K51.414, K51.418, K51.419, K51.50, K51.511, K51.512, K51.513, K51.514, K51.518, K51.519, K51.80, K51.811, K51.812, K51.813, K51.814, K51.818, K51.819, K51.90, K51.911, K51.912, K51.913, K51.914, K51.918, K51.919

AND

Patient encounter during the reporting period (refer to the original measure documentation for specific Current Procedural Terminology [CPT] codes)

AND

Patients who have received or are receiving corticosteroids* greater than or equal to 10 mg/day of prednisone equivalents for 60 or greater consecutive days or a single prescription equating to 600 mg prednisone or greater for all fills: G9469

**Corticosteroids:* Prednisone equivalents used expressly for the treatment of IBD and not for other indications (including premedication before anti-TNF [tumor necrosis factor] therapy, non-IBD indications) can be determined using the following: 1 mg of prednisone = 1 mg of prednisolone; 5 mg of cortisone; 4 mg of hydrocortisone; 0.8 mg of triamcinolone; 0.8 mg of methylprednisolone; 0.15 mg of dexamethasone; 0.15 mg of betamethasone.

Exclusions

None

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions

Patients who have received dose of corticosteroids greater than or equal to 10 mg/day of prednisone equivalents for 60 or greater consecutive days or a single prescription equating to 600 mg prednisone or greater for all fills and who were documented* for risk of bone loss during the reporting year or the previous calendar year

**Documented:* Documentation that an assessment for risk of bone loss has been performed or ordered. This includes, but is not limited to, review of systems and medication history, and ordering of central dual-energy X-ray absorptiometry (DXA) scan.

Exclusions

Unspecified

Numerator Search Strategy

Fixed time period or point in time

Data Source

Administrative clinical data

Registry data

Type of Health State

Does not apply to this measure

Instruments Used and/or Associated with the Measure

Unspecified

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Desired value is a higher score

Allowance for Patient or Population Factors

not defined yet

Standard of Comparison

not defined yet

Identifying Information

Original Title

Measure #271: inflammatory bowel disease (IBD): preventive care: corticosteroid related iatrogenic injury – bone loss assessment.

Measure Collection Name

Inflammatory Bowel Disease

Submitter

American Gastroenterological Association - Medical Specialty Society

Developer

American Gastroenterological Association - Medical Specialty Society

Physician Consortium for Performance Improvement® - Clinical Specialty Collaboration

Funding Source(s)

Unspecified

Composition of the Group that Developed the Measure

Unspecified

Financial Disclosures/Other Potential Conflicts of Interest

Unspecified

Core Quality Measures

Gastroenterology

Measure Initiative(s)

Physician Quality Reporting System

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2015 Dec

Measure Maintenance

Unspecified

Date of Next Anticipated Revision

2017

Measure Status

This is the current release of the measure.

Measure Availability

Source not available electronically.

For more information, contact the American Gastroenterological Association (AGA) at 4930 Del Ray Avenue, Bethesda, MD 20814; Phone: 301-654-2055; Fax: 301-654-5920; E-mail: measures@gastro.org; Web site: www.gastro.org .

NQMC Status

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Production

Source(s)

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